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nationalgrid

# Gas Demand Side Response (DSR)

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An introduction



# What is Gas Demand Side Response?



**Gas Demand Side Response (DSR) is when consumers offer to enter an agreement to reduce their demand, during the build up to a gas emergency, in return for payment.**

In Great Britain the gas market has always provided secure supplies and is likely to remain resilient in all but the most extreme circumstances. Despite this fact, changing UK supply and demand patterns and tighter energy margins mean that having robust contingency plans and a variety of commercial tools in place has never been more important. A key part of developing Gas DSR has been ensuring the right commercial incentives are in place to encourage large gas consumers to voluntarily reduce their demand ahead of a system emergency.

These reductions in consumption would give National Grid access to additional volumes of gas in the build up to an emergency, that could be used to help balance the network.

## What are the benefits?

By providing DSR, large consumers could protect their critical loads by turning down other, less critical ones. It's an innovative and intelligent way of helping to provide greater supply security.

As well as the financial benefits created by reducing the likelihood, severity and duration of a system emergency, Eligible consumers will be paid an agreed Gas DSR offer price if the service is ever used in the build up to, or within a gas emergency.

Gas consumers can choose to reduce their load in a way that best suits the needs of their business. So they could offer volumes of gas on a series of days, or different volumes on individual days. Essentially, the product gives each consumer the flexibility to tailor their agreement to their specific business processes.

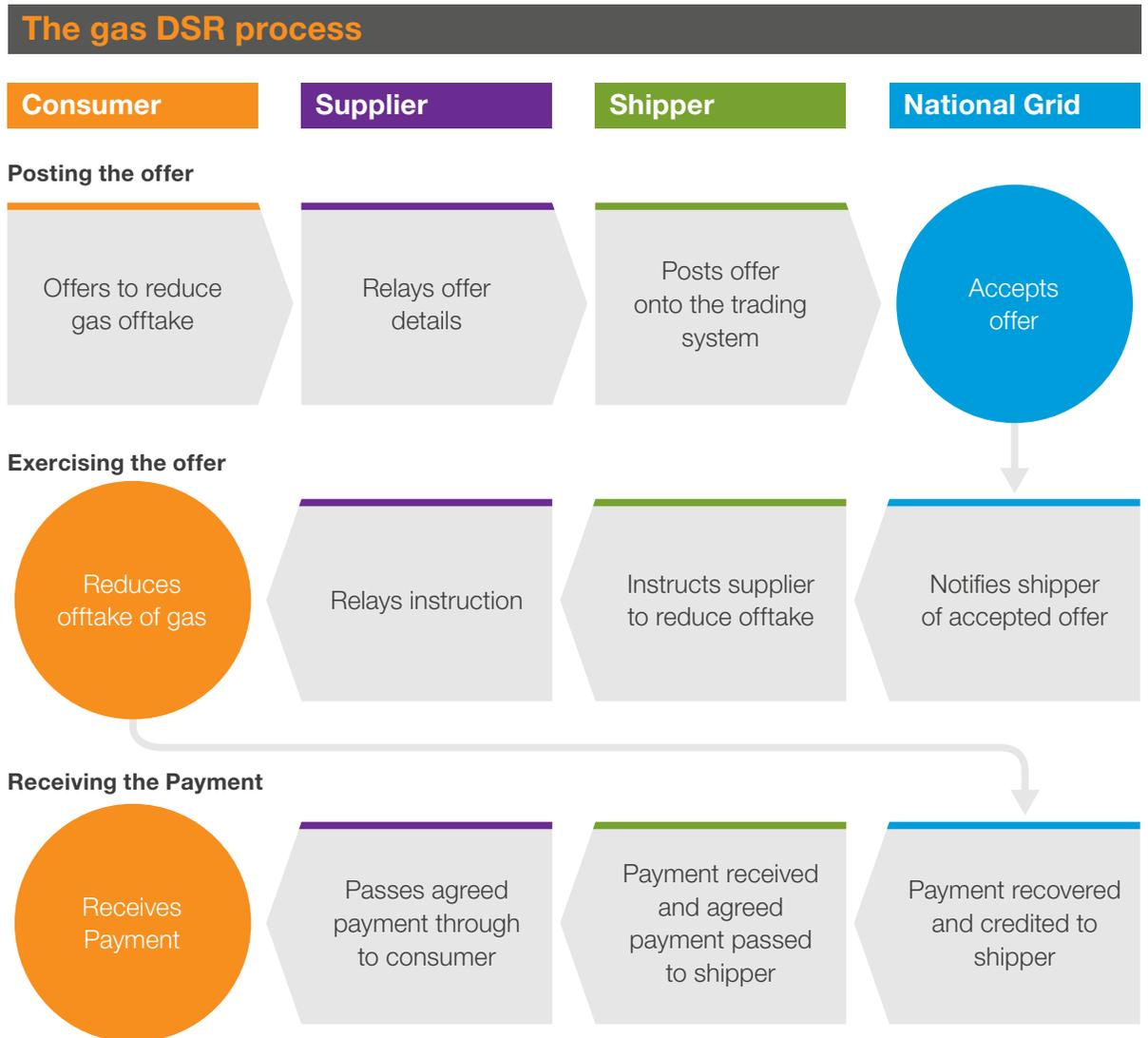
In turn, consumers would also benefit as it has the potential to minimise the cost of demand interruptions and further reduce the chance of entering into, or increasing the severity of an emergency.

# How does it work?

Gas DSR Service predominantly involves a three way party interaction between Gas Consumers, gas Shippers and National Grid. This becomes a four way interaction when a gas Supplier is involved in between the Gas Consumer and the Shipper.

## The role of each party

- **Consumer:** Eligible gas consumers contact their gas supplier / shipper and offer to reduce gas consumption for a fee. If instructed gas consumption will be reduced.
- **Supplier:** If involved the supplier acts as the intermediary between the consumer and shipper
- **Shipper:** Following consumer agreement the DSR offer is posted onto a central trading system which only National Grid can accept. Consumers will be informed if their offer is accepted.
- **National Grid:** Subject to gas emergency circumstances, National Grid will accept the offer informing the gas shipper.



# When will it be used?

## Gas DSR is linked to the gas emergency framework.

National Grid will only consider accepting DSR Offers in the period following the declaration of a Gas Deficit Warning (GDW) and either the (GDW) being revoked or the end of the Gas Deficit Emergency (GDE) Stage 1 (the DSR Period) i.e. entry into Stage 2.

A shipper can specify a lead time when it inputs a DSR Offer into the online trading system. There is a minimum lead time of an hour associated with the shipper re-nominating once a DSR Offer has been accepted.

## Emergency Frameworks Summary

Business as Usual & Constraint Management

- Shipper Balancing & Incentives
- Transporter Balancing / Capacity Actions & Incentives
- ANS Messages & Notices

### Gas deficit warning

### NEC emergency actions

Stage 1 (potential)

- NTS Linepack Usage
- Distribution Network Co-operation & Storage Usage
- GS(M)R Gas Specification range widening

Stage 2

- National Grid suspends participation in OCM
- Maximise NTS Supplies
- Firm Load Shedding

Stage 3

- Distribution Network Allocation & Isolation
- Public Appeals

Stage 4

- Restoration of Supplies
- Purge & Relight

# How you can get involved

## Who Can Participate?

In order to be eligible for DSR a Gas Consumer has to be a Daily Metered Supply Point which has an annual quantity greater than 58,600,000 kWh (2,000,000 therms). The minimum quantity for a DSR offer is 100,000kWhs/day.

## What can I offer?

The DSR Product may be offered as;

- An individual daily product; or
- A multiday product (maximum of 7 days) with identical energy volumes on each day within the multiday offer.

## Discuss with your Shipper / Supplier

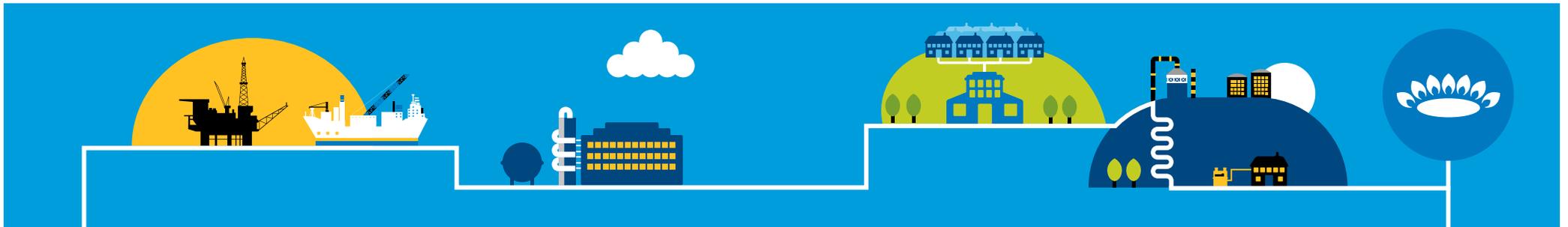
To participate in Gas DSR a Gas Consumer will need to enter into a Gas DSR contract with their registered shipper. This contract covers the physical action by the Gas Consumer to reduce consuming gas at a specific site. The Shipper will agree to place a DSR offer on a central trading platform reflecting the agreed gas volume and unit price. In return the Gas Consumer commits to honouring and delivering on the agreed offtake reduction if called on to do so.

## What the Shipper does on your behalf

Shippers will be able to place DSR Offers on the On-the-day Commodity Market (OCM) which has been adapted to include a new DSR Locational Market. Only National Grid NTS will be permitted to accept offers on this market ensuring that gas is only required at times of need. Similarly shipper market participants will only be able to place DSR offers on behalf of Gas Consumers.

DSR offers will not be visible on the DSR Locational Market until a Gas Deficit Warning for a Gas Day has been declared. All accepted offers will be included in the system clearing processes and cash-out for the relevant gas day.

All other OCM Markets will see no change as a result of Gas DSR.



# Frequently Asked Questions

## 1. Is there a restriction on the number of DSR offers?

No. There is no limit on the number of DSR Offers eligible gas consumers can make at a specific *Daily Metered Supply Point*. All DSR Offers must be a minimum of 100,000 kWh.

## 2. How long does a DSR Offer last after it is exercised?

A DSR Offer can be submitted on a daily basis (daily product) or on a multiday basis (multiday product). Once the DSR Offer has been exercised it will last for the duration for which the contract is struck e.g. for a daily product this will last for one day, for a multiday product this could last up to 7 days, but this is dependent upon the original DSR Offer duration agreed.

## 3. How does DSR accommodate partial interruption?

The DSR mechanism allows gas consumers to turn down a proportion of their energy demand and does not require sites to completely cease offtake of gas. This turn down can be offered in multiple tranches of energy quantity, which may be priced individually, according to the Value associated with each separate tranche. Each tranche will be submitted as a single DSR Offer and must meet all of the eligibility criteria for a DSR Offer (e.g. minimum size of 100,000 kWh/day). Therefore it is possible for there to be more than one DSR Offer at a specific Daily Metered Supply Point.

## 4. How will payments be made for DSR?

DSR payments will be in accordance with the agreed DSR Offer price for the contract duration. These will be paid within the timescales outlined in the Uniform Network Code (UNC). Shippers are obliged to pass on payments in a reasonable timeframe and will be able to advise.

## 5. How quickly can a Gas Consumer resume normal consumption?

Within the DSR Period gas consumers may resume consumption on the day following the end of their DSR Offer contract (a gas day is 05:00 to 05:00). Where a DSR offer is submitted and is subsequently accepted by National Grid on the day where the situation progresses into a Gas Deficit Emergency Stage 2, the Supply Point at which the DSR Offer has been accepted will be required to maintain the reduction until instructed by the National Emergency Coordinator (NEC) that its offtake reduction is no longer necessary.

## 6. How will a reduction in demand be monitored? And are there penalties involved if DSR is not actioned?

The demand reduction will not be monitored and there are no penalties from National Grid Gas. However, the shipper will be responsible for re-nominating at the site and should a reduction not occur then the shipper will be out of balance and will receive an imbalance charge. Gas consumers should discuss with their shipper whether their contractual agreement will include a penalty.

**If you have any further questions regarding DSR please contact [box.operationalliaison@nationalgrid.com](mailto:box.operationalliaison@nationalgrid.com)**

# Useful links



**Gas DSR has been developed over a number of years and there are numerous valuable information sources available to expand your knowledge.**

## Gas DSR Methodology

This is the key document which defines the way Gas DSR will be enacted:

[www.gasgovernance.co.uk/gasDSR](http://www.gasgovernance.co.uk/gasDSR)

[www.gasgovernance.co.uk/dsr](http://www.gasgovernance.co.uk/dsr)

## Regulatory changes to implement Gas DSR

Changes were made to the Uniform Network Code to formalise the Methodology:

[www.gasgovernance.co.uk/0504](http://www.gasgovernance.co.uk/0504)

[www.gasgovernance.co.uk/0591](http://www.gasgovernance.co.uk/0591)

## Electricity Demand Side Response

Gas DSR should not be confused with the Electricity DSR arrangements, which do not follow the same principles. Further information on Electricity DSR can be found here:

[www2.nationalgrid.com/UK/Services/Balancing-services/Demand-Side-Response/](http://www2.nationalgrid.com/UK/Services/Balancing-services/Demand-Side-Response/)

## National Grid DSR

The centralised page for all details on Gas DSR:

<http://www2.nationalgrid.com/UK/Industry-information/Gas-transmission-system-operations/Balancing/Gas-DSR/>

Please visit our website at

<http://www2.nationalgrid.com/UK/Industry-information/Gas-transmission-system-operations/Balancing/Gas-DSR/>

If you have any further questions or comments about Gas DSR please contact us at

[box.operationalliaison@nationalgrid.com](mailto:box.operationalliaison@nationalgrid.com)

